

Airport Vicinity Overlay District Planning and Zoning Commission

Mayor's Ad Hoc Committee
August 11, 2022

Airport Area: “Tapestry” of Plans

- **2009 Airport Master Plan (Adopted 2011) - Appendix 3: Land Use Plan**
 - Layered Approach: General Plan + ASAP + Noise/Interior Sound + Safety/Compatibility
 - Created **Noise Contours and Airport Impact Zones**
 - Created **Compatible Land Use Matrix - 6 Zones + Residential OK if outside 55DNL contour**
 - Created **Land Use Densities and Open Space Matrix**
 - Created Land Use Compatibility Matrix for **Ranching Parcels**
- **Airport Specific Area Plan (2001,+ plus revisions)**
 - **Established the Airport Influence Area – Avigation Easements Required!**
 - **Referenced Airport Impact Zones and Noise Contours – Tied to Land Uses and Limits**
 - **Residential only - in Impact Zone 6 AND outside 60DNL contour**
 - **Exception: a “holistic land use plan to protect the long-term operations of the airport” **FIX!****
- **General Plan (2015) Sect 5 Goal 5: Apply compatible land uses within the airport impact zones & airport area which permit continued responsible development & protect [airport] viability.**
 - **5.1 Protect airport from encroachment of incompatible land uses** thru amendments to the LDC and ASAP to reflect FAA guidelines and enforcement of land use designations and policies, and zoning designations.
 - **5.2 Establish an airport-area commercial employment zoning district, which does not permit residential uses**, to assure commercial land availability (near) the airport.

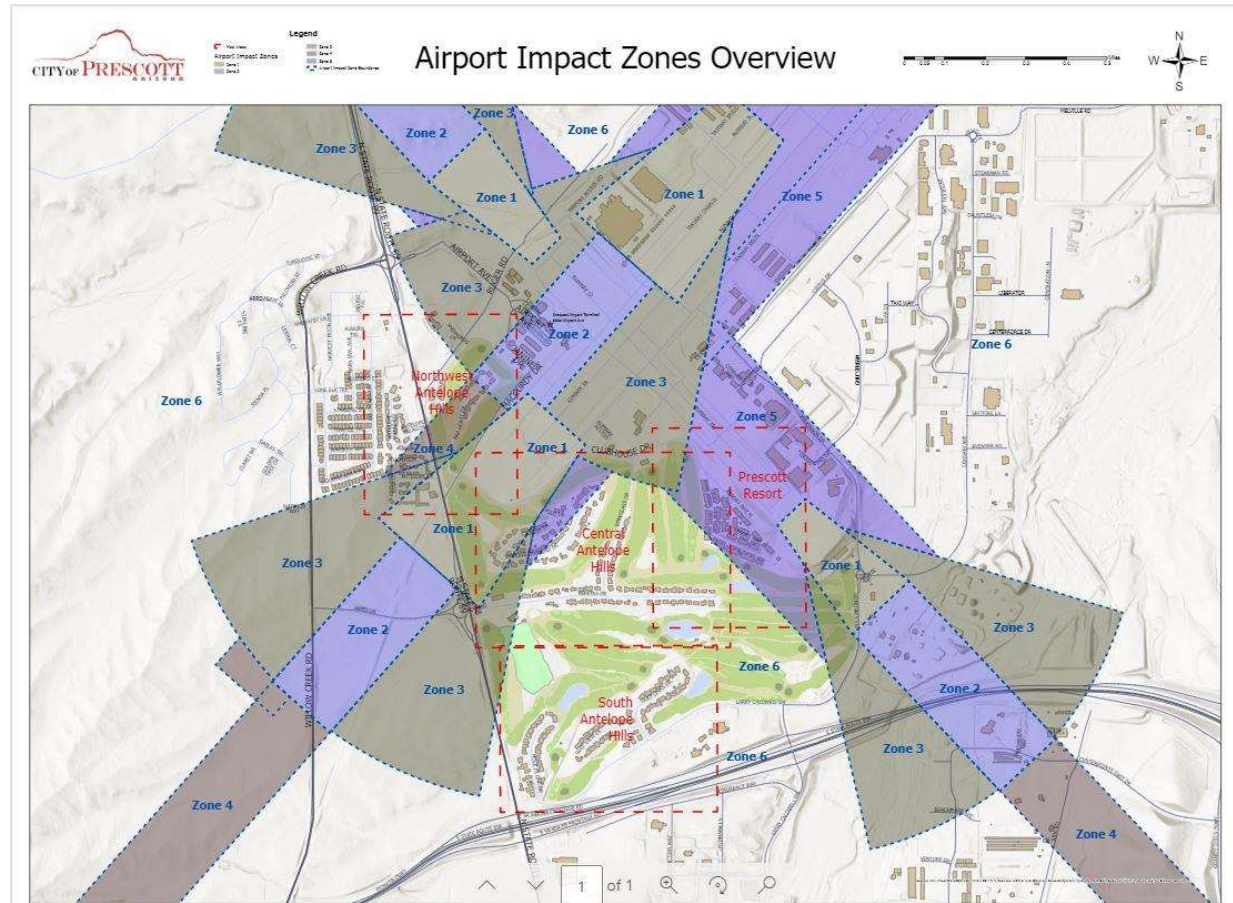
Airport Master Plan - Appendix 3: (Airport) Land Use Plan

Airport Impact Zones (based on NTSB data) widely adopted standard to:

- **limit damages** caused by an aviation accident
- **protect airport viability**
- **limit noise & overflight impact** on residential/sensitive uses

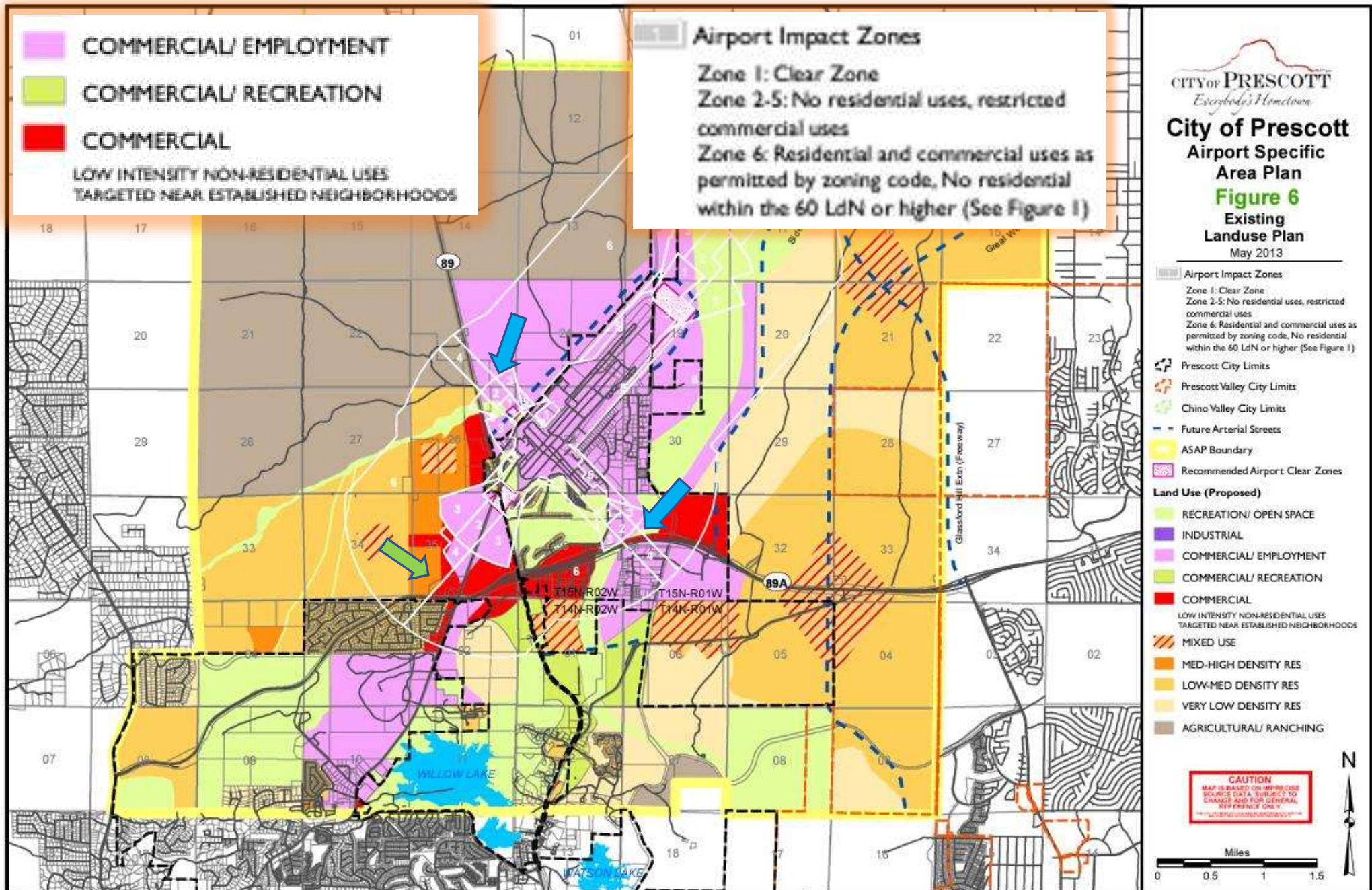
Per Land Use Plan:

- *Residential OK in 4, 5, 6 outside 55 DNL Contour, & at Low/Mid Density*
- *Sensitive Uses (church, day care, school) OK in Zone 6, outside the 60 DNL.*



Impact Zone 1 (Runway Protection Zone): 20-21% of impacts, **risk level = "very high"**
Impact Zone 2 (Inner Safety Zone): 8-22% of impacts, **risk level = "high"**
Impact Zone 3 (Inner Turning Zone): 4-8% of impacts, **risk level = "moderate to high"**
Impact Zone 4 (Outer Safety Zone): 2-6% of impacts, **risk level = "moderate"**
Impact Zone 5 (Sideline Safety Zone): 3-5% of impacts, **risk level = "low to moderate"**
Impact Zone 6 (Traffic Pattern Zone): 18-29% of impacts, **risk level = "low"** (% high as large area encompassed)

Airport Specific Area Plan (ASAP)



Airport Specific Area Plan (ASAP)

Figure 6

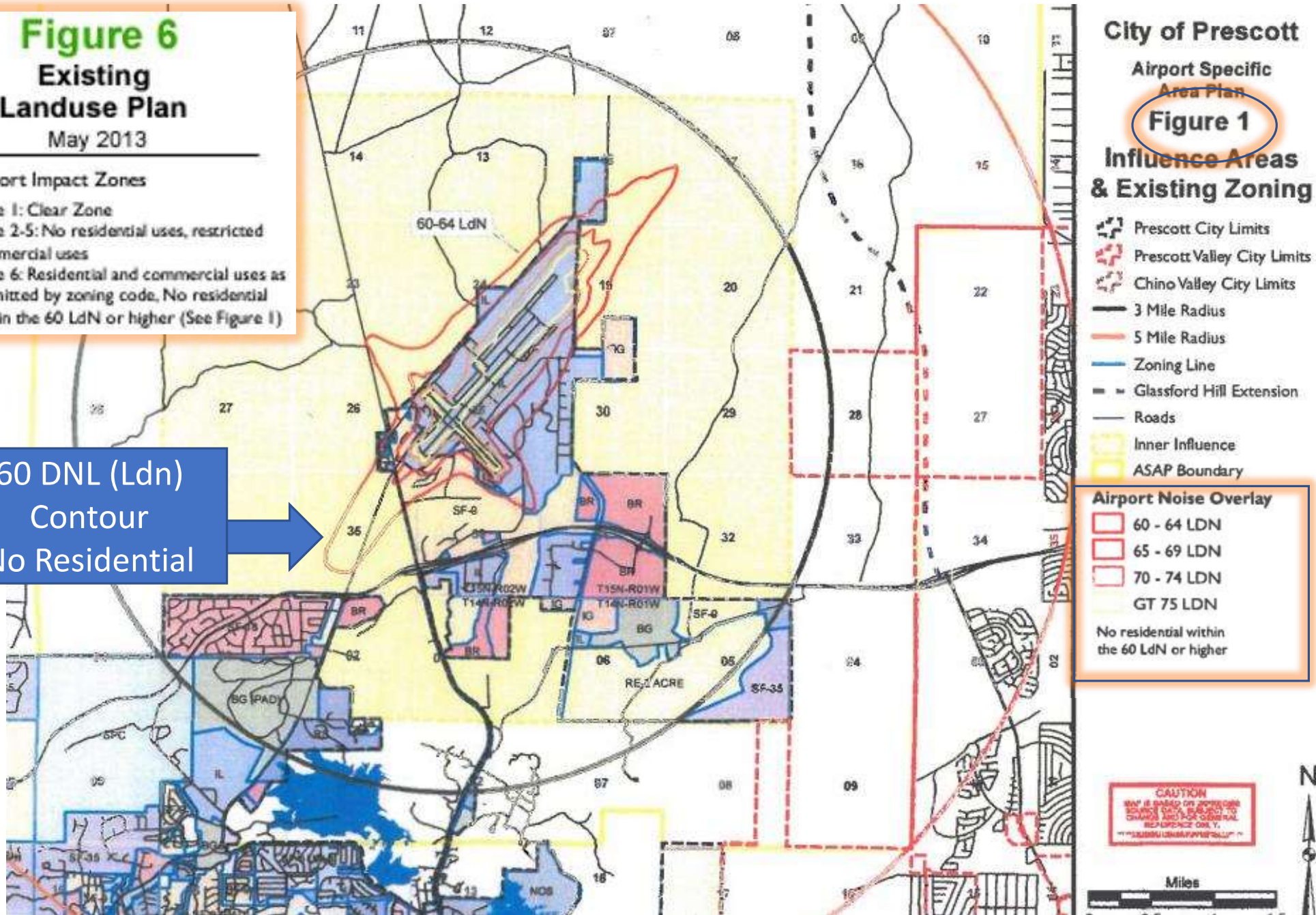
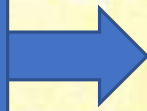
Existing Landuse Plan

May 2013

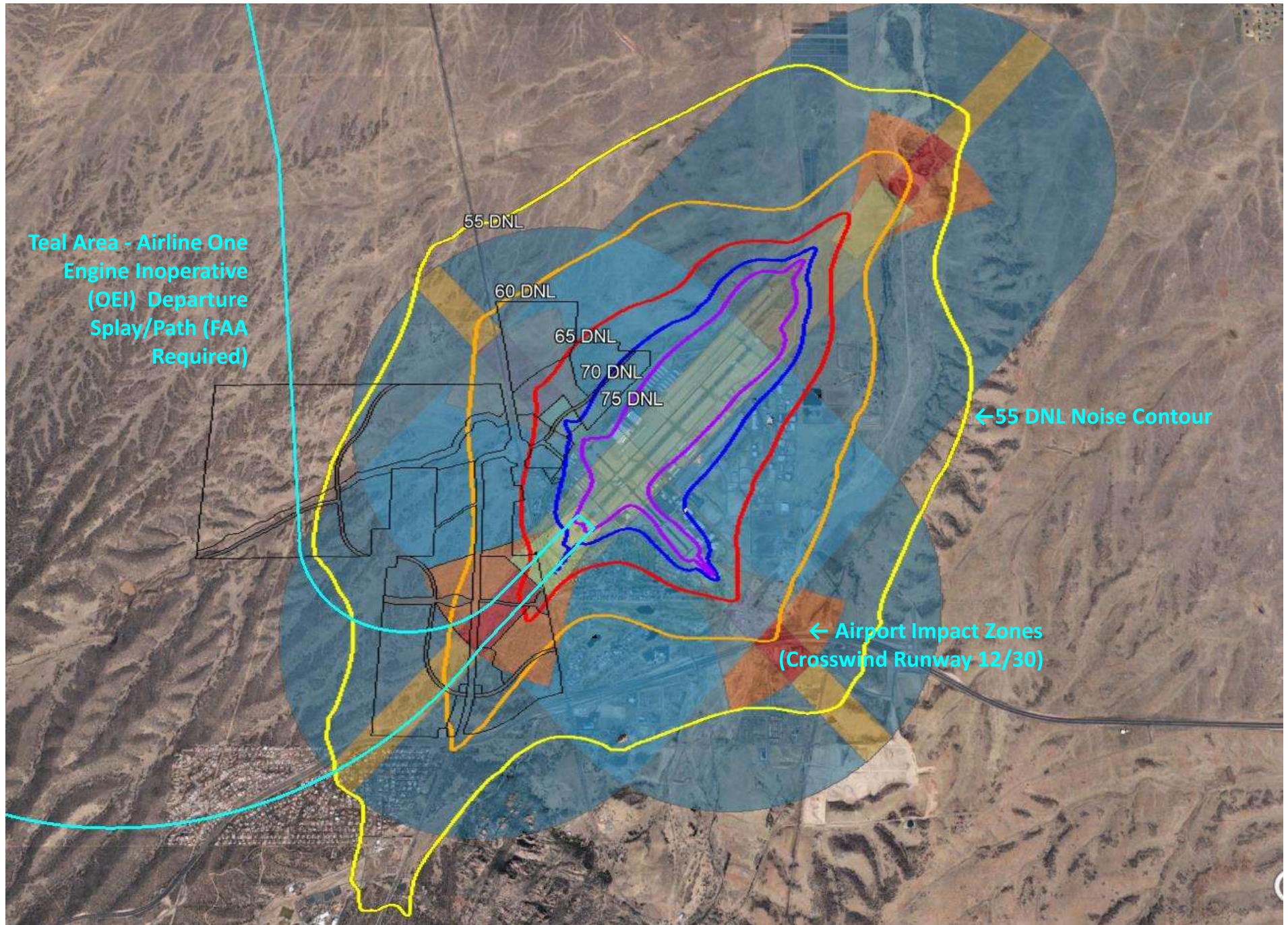
Airport Impact Zones

- Zone 1: Clear Zone
- Zone 2-5: No residential uses, restricted commercial uses
- Zone 6: Residential and commercial uses as permitted by zoning code. No residential within the 60 LdN or higher (See Figure 1)

60 DNL (Ldn)
Contour
No Residential



PRC Noise Contours (2021 Actual Data)



Noise Contours & Land Use

FAA “official” position (FAA.gov, assurances, letters, & FAR Part 150)

- Responsibility for determining permissible land use between specific properties and noise contours rests with local authorities.
- Airport sponsor assurances: must reasonably assure **compatible land use** and continued current & future **normal aircraft operations**.
- **FAA Incentives:** home sound mitigation \$ and airport development \$.
- **FAR Part 150:** Create current and 5+ year contours (& publish 3x)
- **65 DNL = 1980 “threshold of significance”** (residential ok below). Why :
 - Couldn’t afford EPA 55 DNL standard = “reasonable margin of safety”
 - Used HUD (urban) 65 DNL - Schultz Curve 10% highly annoyed in 65DNL
 - **2021 Neighborhood Environmental Survey:** 60-70% highly annoyed in 65
- More stringent local or state noise level standards are OK. (CA, OR, CO, +)

Ex: Denver Regional Council of Gavs (Compatible LU Handbook):

- Noise sensitive land uses (SF residential, schools, hospitals, churches) are:
 - Only marginally acceptable within the 55-60 DNL
 - Normally unacceptable within the 60 DNL
 - Clearly unacceptable within the 65 DNL

Benefits of the proposed AVO

- ✓ Provides **mapped boundaries** for noise and impact zones
- ✓ Includes **allowable uses or limits within zones/contours**
- ✓ Provides **clear explanation of the various zones/contours**
- ✓ Provides **explanation and boundaries for aviation easements**
- ✓ Provides **fair notice disclosure requirements** to residents
- ✓ Provides **boundaries and notice for FAA baseline airspace** evaluation
- ✓ Provides **additional protections for critical airspace**
- ✓ Provides **measures for hazard prevention, mitigation and removal**
- ✓ Promotes **community health, safety and welfare**
- ✓ Complies with **Federal grant assurances – obstructions, compatible land use**
- ✓ Supports **future airport development including commercial runway extension**

Airport, Airspace & Community Layers of Protection

Protected Areas & Assessments

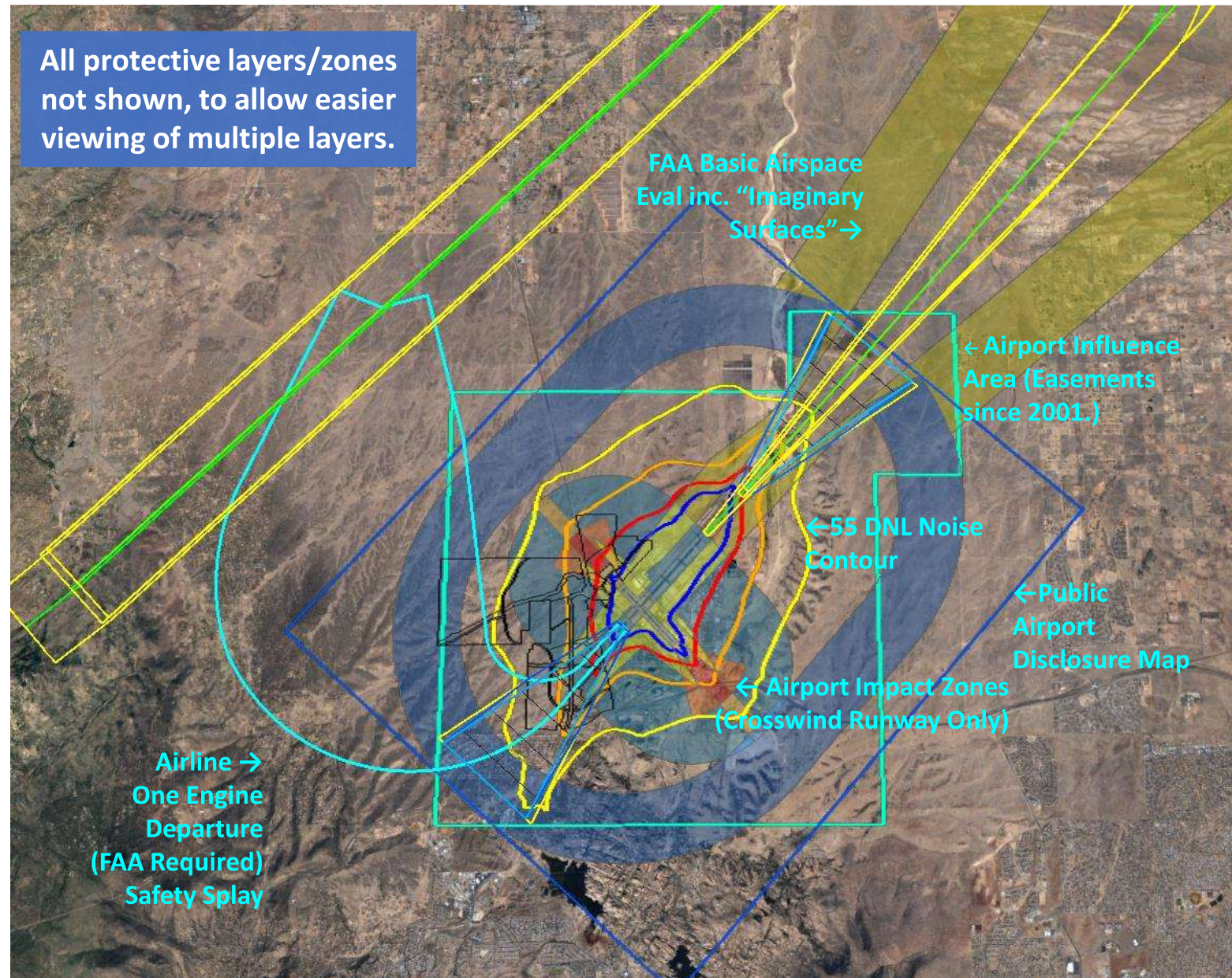
- **Airport Impact Zones (AIZs)** - Safety, Overflight, Compatibility
- **Noise Contours** (Average Sound Level) - Compatibility, Construction Standards
- **Airline One-Engine Departure (OED) Splay/Path** (FAA-Required Height Limits)
- **FAA "Basic" Evaluation of Airspace (Obstructions)** (Initial Height Limits)

Easement & Disclosures

- **Airport Influence Area (AIA)** - Avigation Easements Required
- **Public Airport Disclosure Map** - ARS Required
- **Fair Notice Disclosure** - Renters and Buyers

Other Impacts or Considerations:

Smoke, Lights, Solar (Glare),
Drones, Wildlife Attractants,
Development Agreements



Land Use - Densities and Open Space

| Airport Impact Zones | Nonresidential Maximum Recommended Land Use Density (persons/acre) | Residential Maximum Recommended Single Acre Land Use Density * (dwelling units/acre) | Minimum Recommended Percent Open Space (% gross area) |
|----------------------|--|--|---|
| Zone 1 | 0 | 0 | 100 |
| Zone 2 | 20 | 0 | 30 |
| Zone 3 | 60 | 0 | 25 |
| Zone 4 | 40 | 7 | 20 |
| Zone 5 | 150 | 7 | 10 |
| Zone 6 | 150 | 7 | 10 |

*Residential only outside the 55 DNL

Land use identified as “Compatible” are not considered to present a significant risk to the safety of persons on the ground or to persons in aircraft overflying the land, and the anticipated aircraft noise or frequent aircraft overflight is considered to be acceptable by FAA, State and local standards and regulations.

Land uses identified as “Non-Compatible” are considered to present a significant risk to the safety of person on the ground or to persons in aircraft overflying the land, and/or the anticipated aircraft noise or frequent aircraft overflight is considered not to be acceptable by FAA, State and local standards and regulations.

Typically, the level of risk is correlated with population density, where higher densities pose a higher statistical risk to the safety of persons in the event of an accident. Therefore, land use with high population densities are discouraged in the vicinity of the airport. Table 5: *Recommended Land Use Densities and Open Space* presents the maximum recommended density for each of the Airport Impact Zones.